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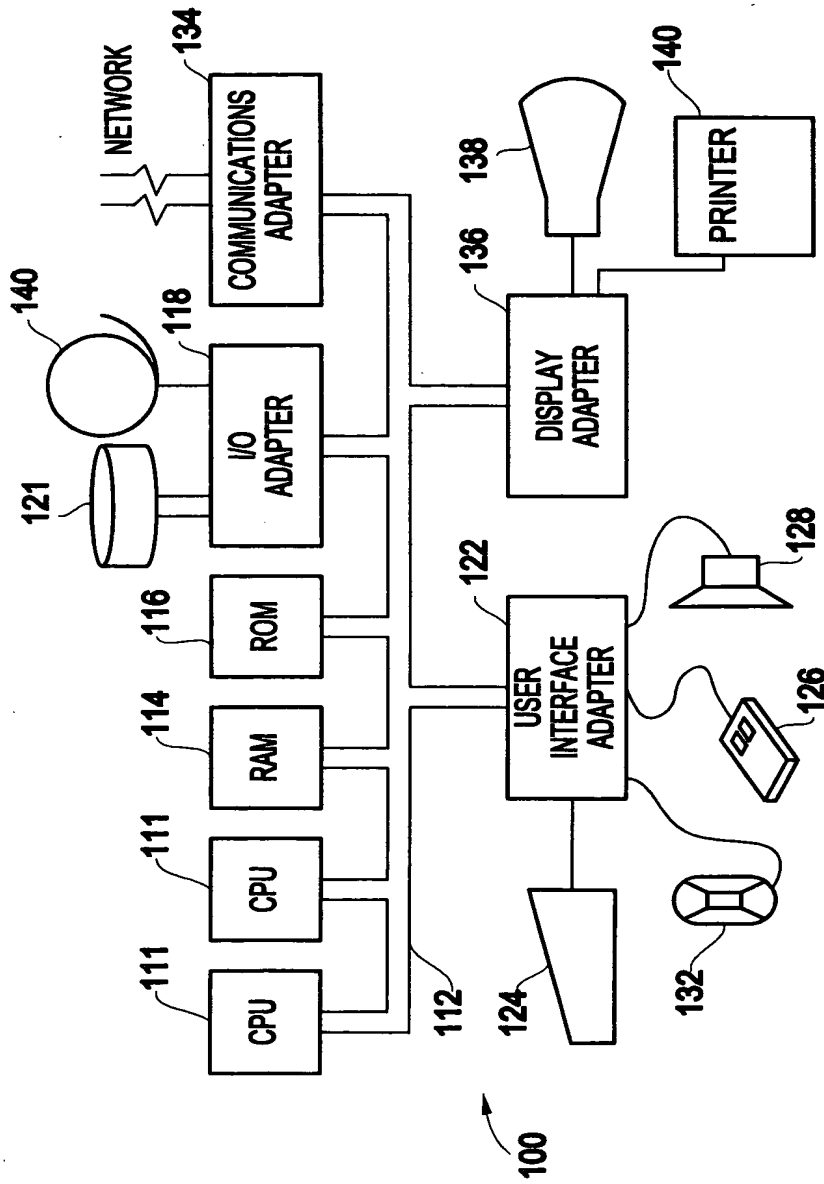


FIG.1

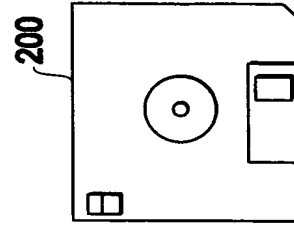
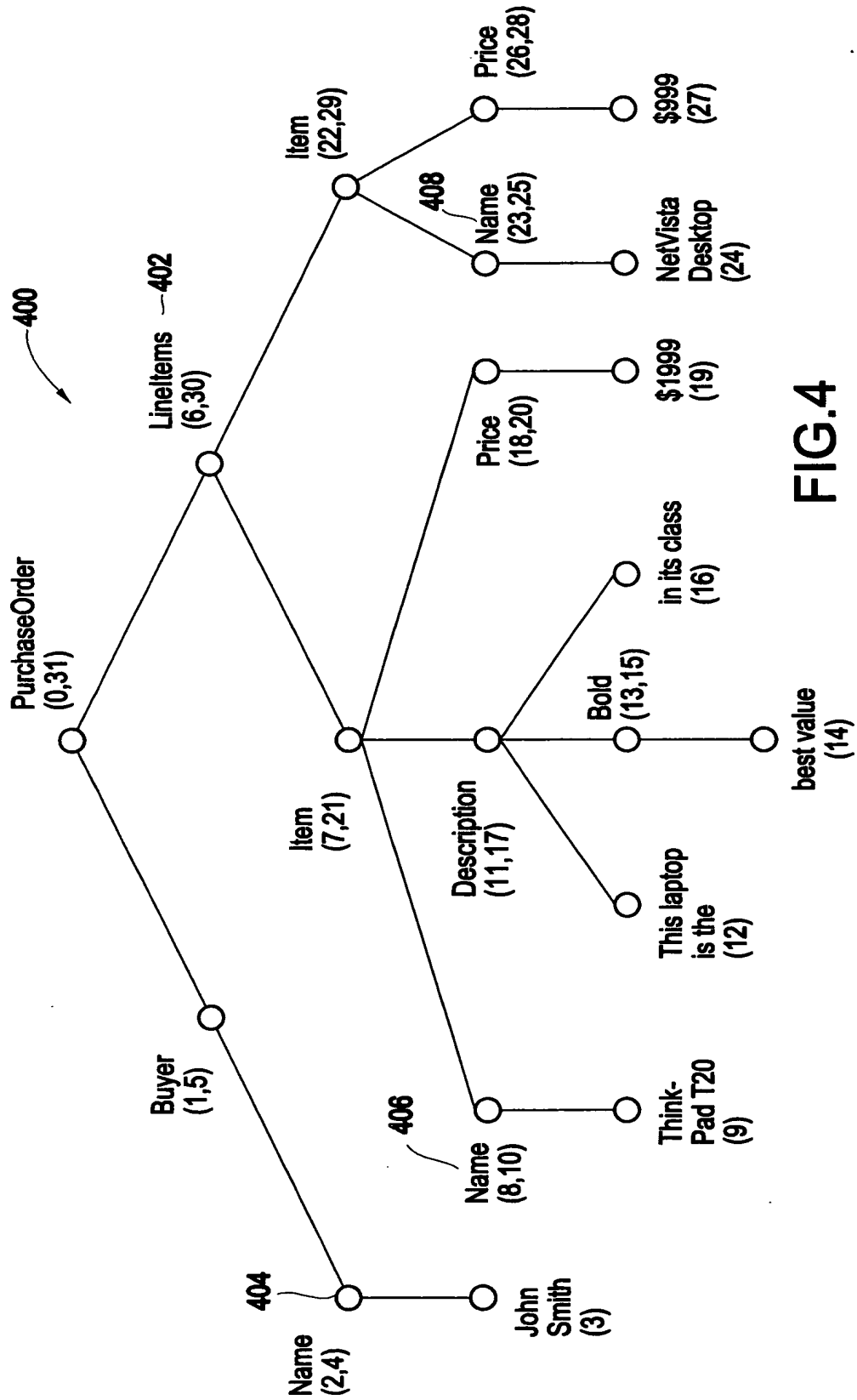
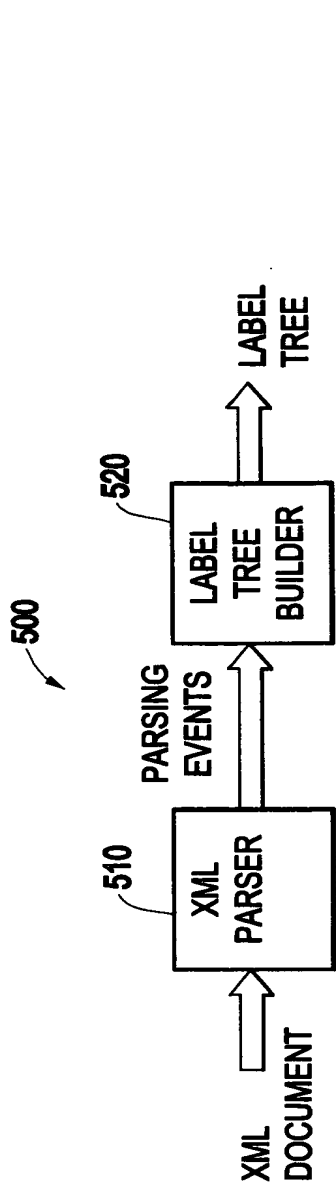


FIG.2

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<PurchaseOrder>
  <Buyer>
    <Name>John Smith</Name>
  </Buyer>
  <LineItems>
    <Item>
      <Name>ThinkPad T20</Name>
      <Description>
        This laptop is the <Bold>best value</Bold> in its class
      </Description>
      <:Price>$1999</Price>
    </Item>
    <Item>
      <Name>NetVista Desktop</Name>
      <:Price>$999</Price>
    </Item>
  </LineItems>
</PurchaseOrder>
```

FIG.3





BUILDING THE LABEL TREE IN BULK-LOADING MODE

FIG.5

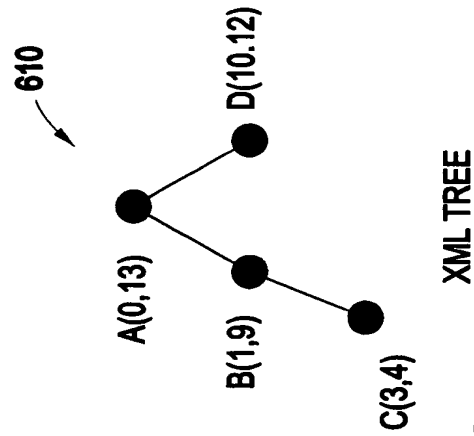


FIG.6A

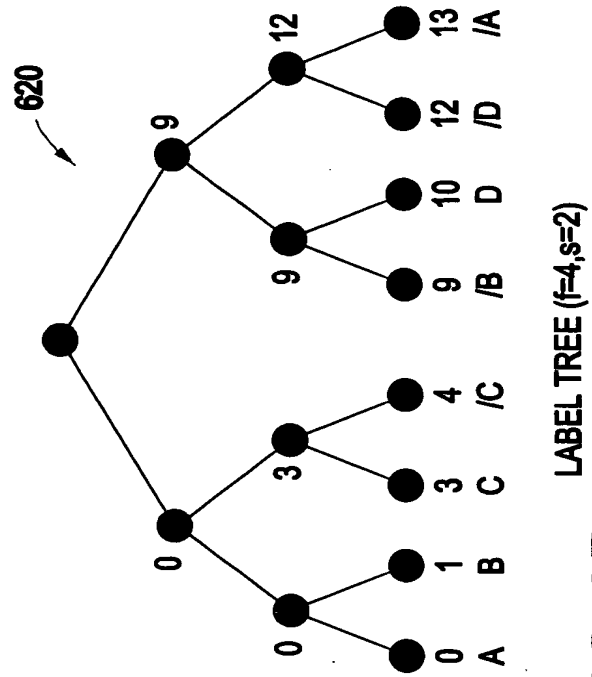
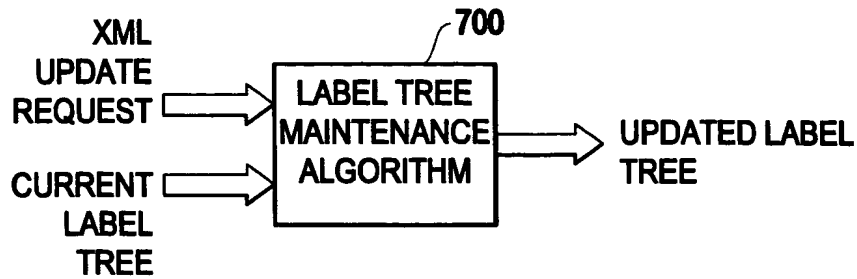
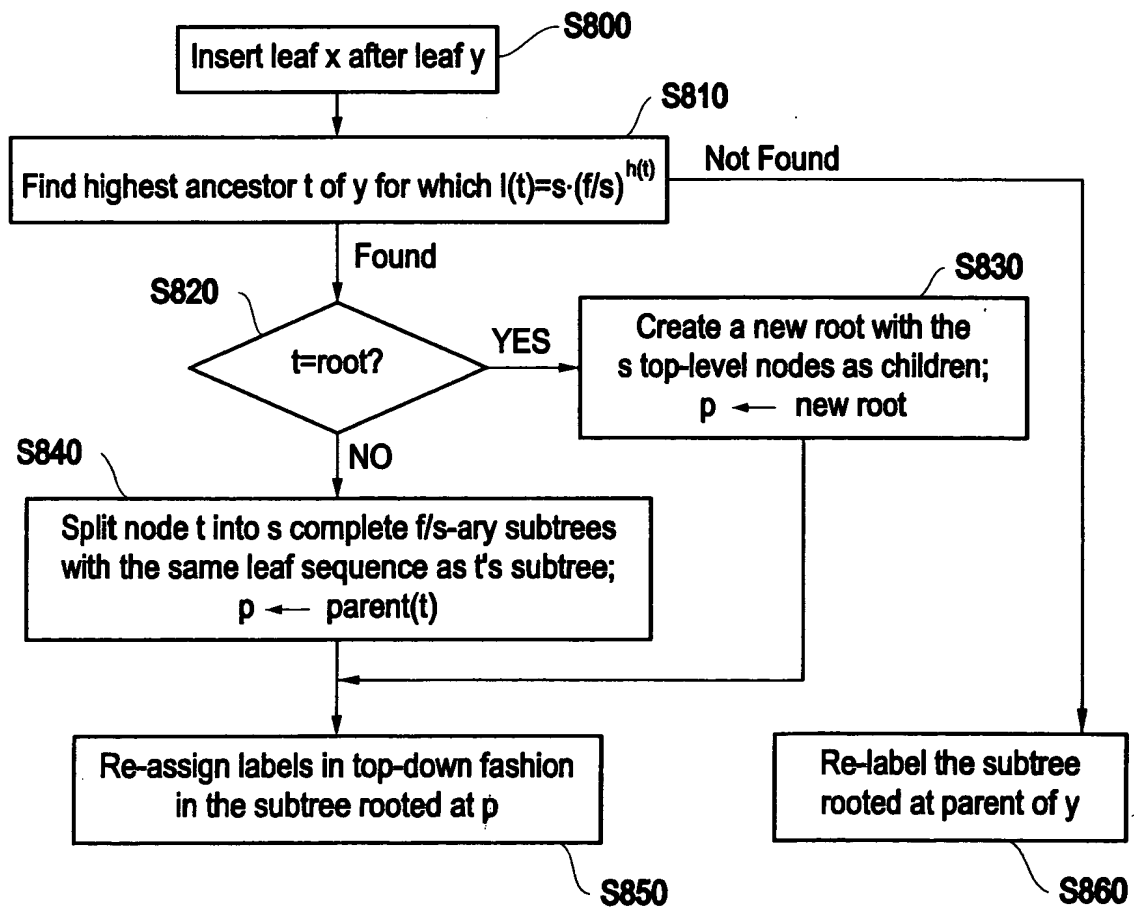


FIG.6B



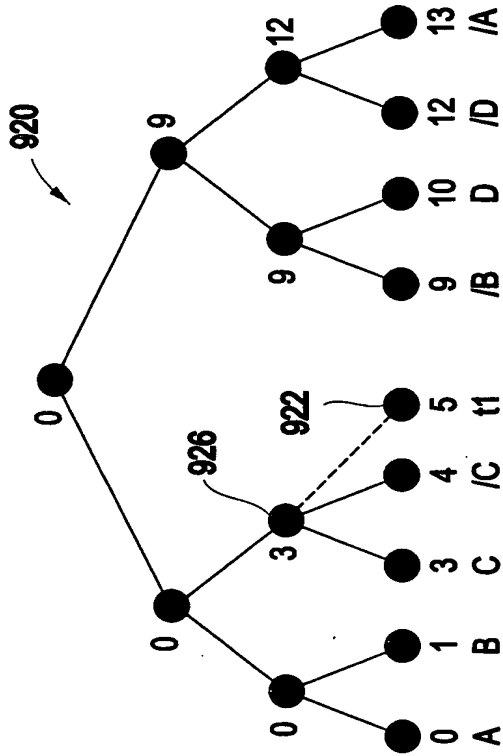
MAINTAINING THE LABEL TREE IN RESPONSE TO UPDATES

FIG.7



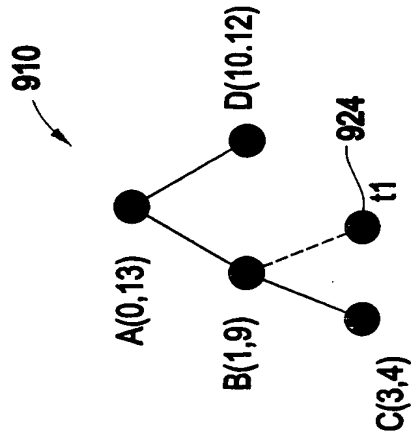
LABEL TREE MAINTENANCE ALGORITHM

FIG.8



LABEL TREE (f=4,s=2)

FIG. 9B



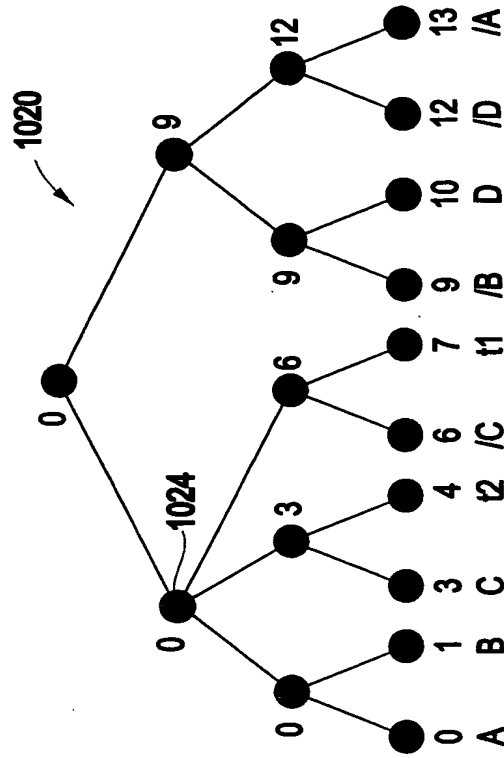
XML TREE

FIG. 9A



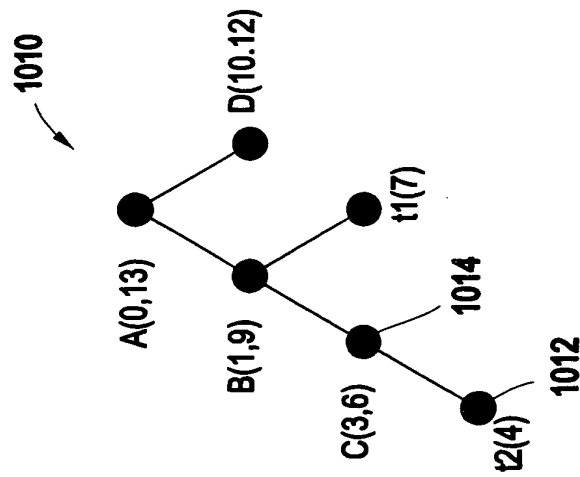
FIG. 10A





LABEL TREE (f=4,s=2)
(AFTER INSERTION)

FIG.10D



XML TREE (AFTER INSERTION)

FIG.10C

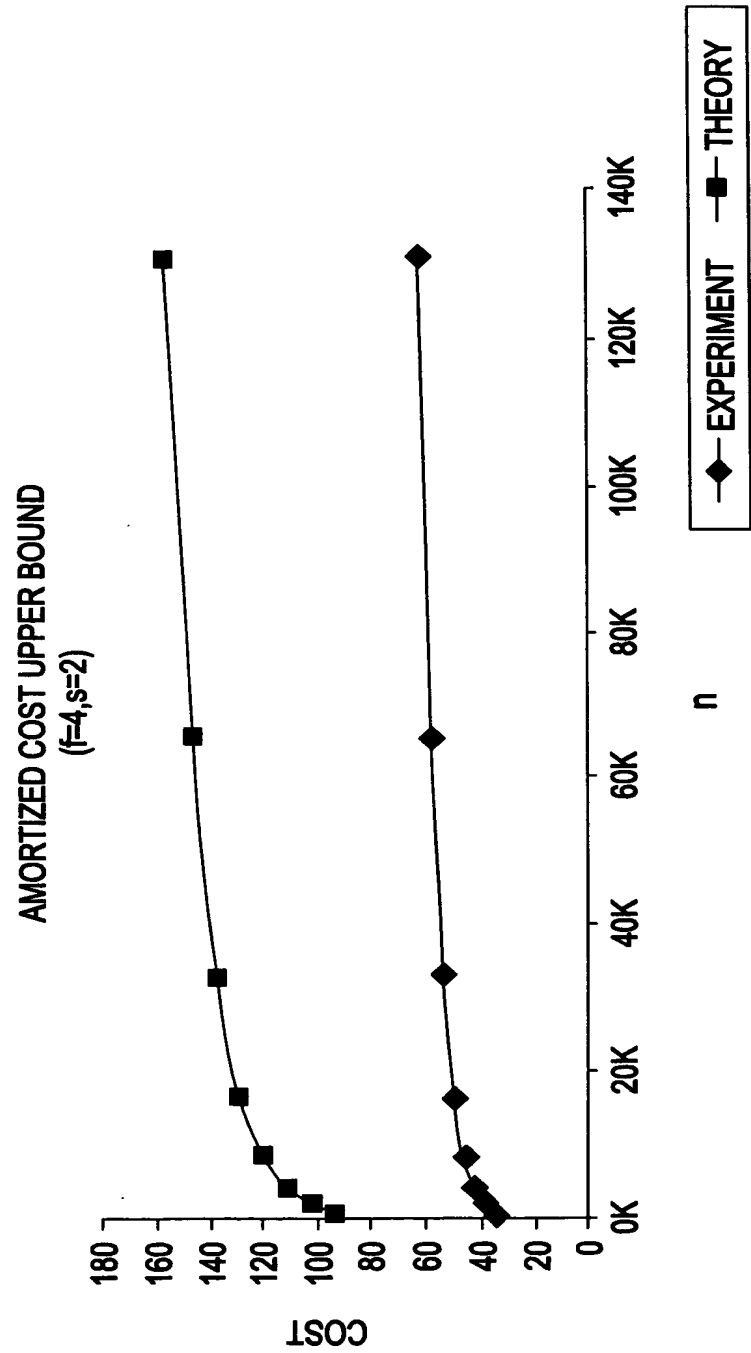


FIG.11

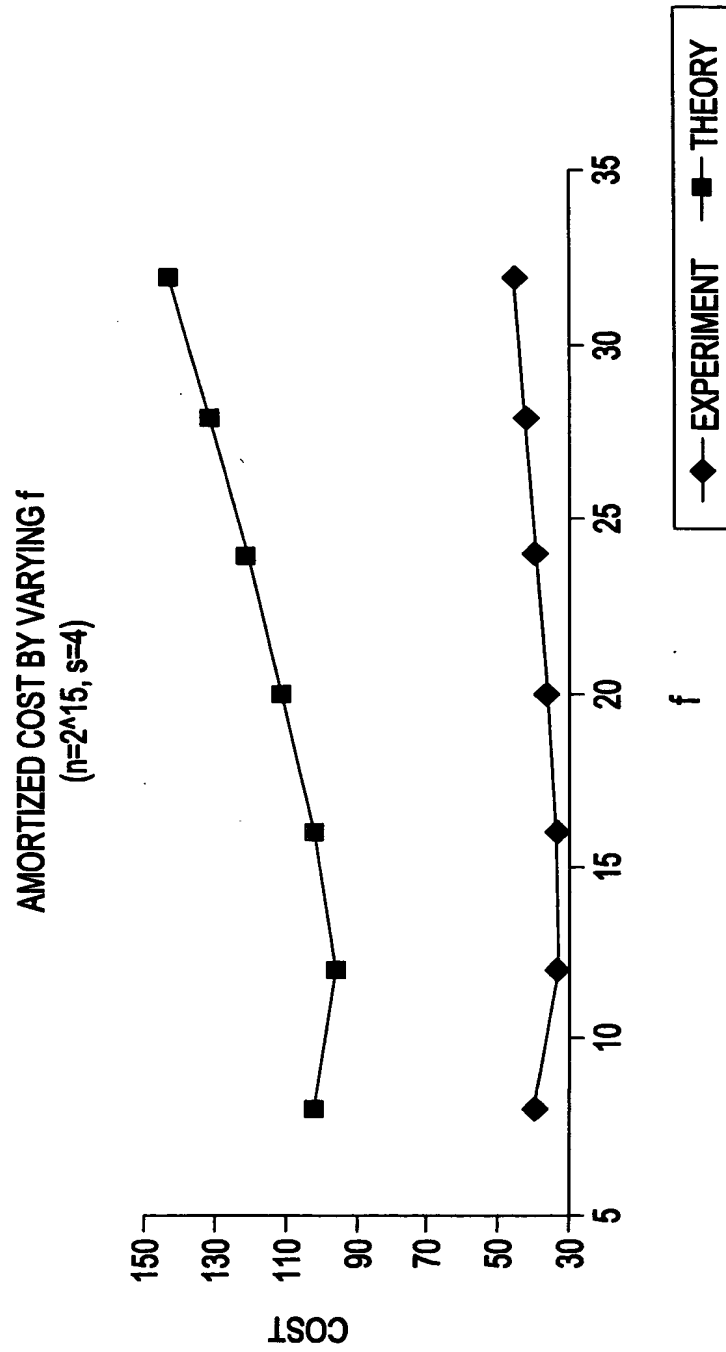


FIG.12

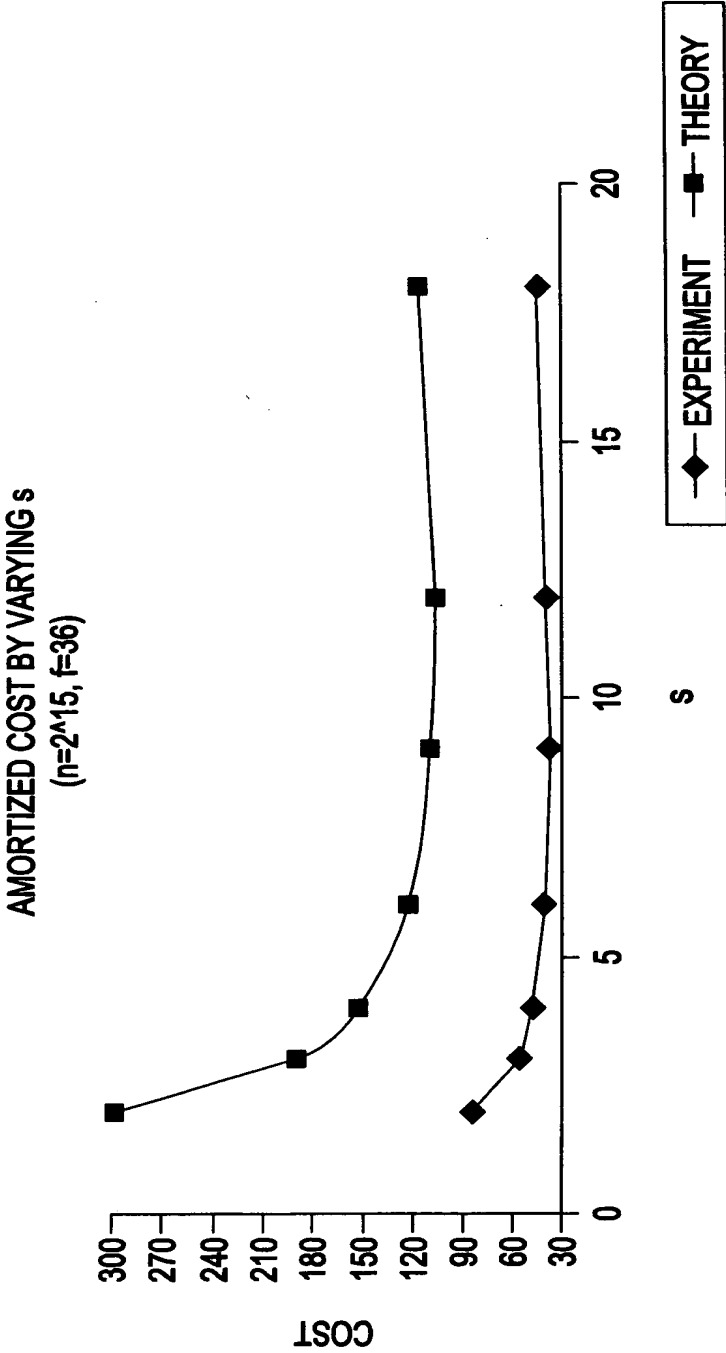


FIG.13

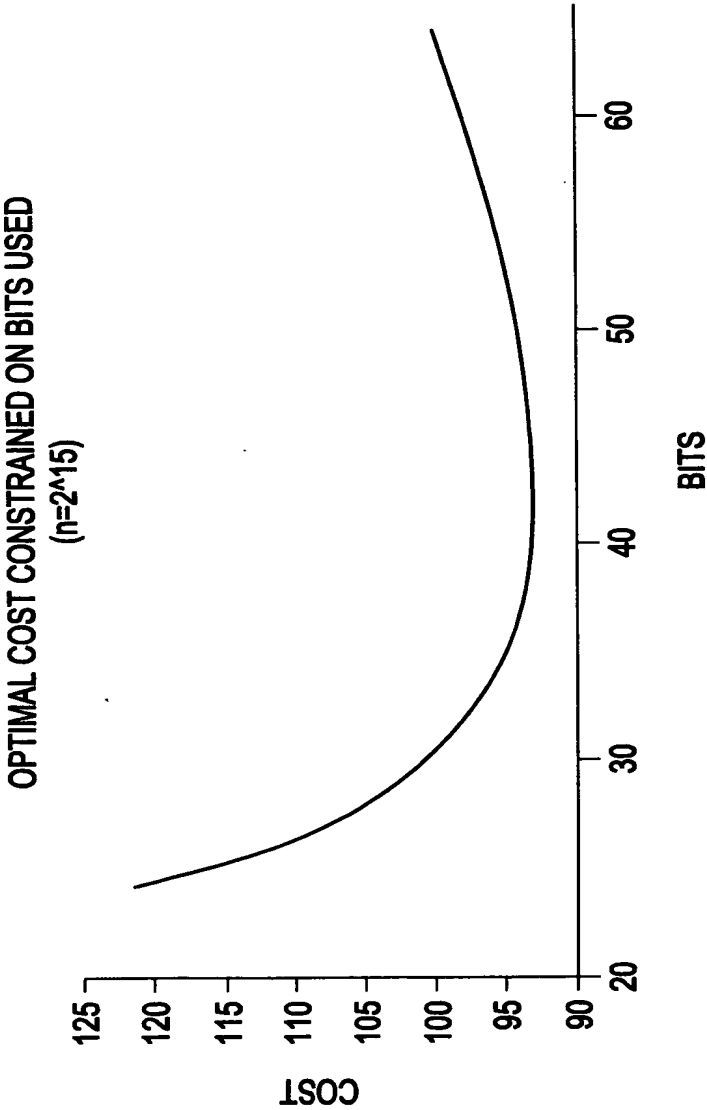


FIG.14